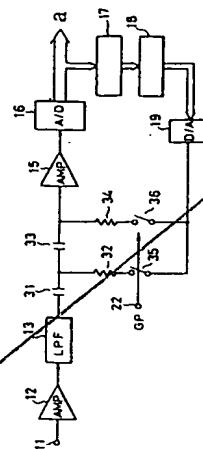


(54) CLAMP CIRCUIT

(11) 2-261283 (A) (43) 24.10.1990 (19) JP
 (21) Appl. No. 64-83601 (22) 31.3.1989
 (71) TOSHIBA CORP(1) (72) KAZUHIRO NAKAMURA(1)
 (51) Int. Cl^s. H04N7/20, H04N7/00, H04N7/12

PURPOSE: To improve the elimination ratio of an energy spread signal without deteriorating the elimination ratio of low frequency noise by providing plural stage clamp means whose time constant differs and setting the elimination ratio of the low frequency noise and a dispersal signal independently.

CONSTITUTION: The time constant represented by a capacitance of a 1st clamp capacitor 31 and a resistance of a resistor 32 is set to a value sufficiently eliminating low frequency noise and the time constant represented by a capacitance of a 2nd clamp capacitor 33 and a resistance of a resistor 34 is set to a value sufficiently eliminating a dispersal signal. Through the constitution above, the low frequency noise included in a MUSE signal is eliminated by the action of the capacitor 31 and the resistor 32 and the dispersal signal is eliminated by the action of the capacitor 33 and the resistor 34 thereby obtaining the MUSE signal, from which both the low frequency noise and the dispersal signal are sufficiently eliminated.



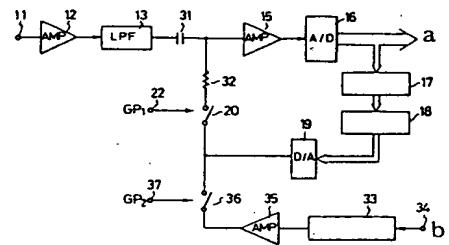
a: to MUSE signal processing section, 17: level detection,
 18: DC reproduce

(54) CLAMP CIRCUIT

(11) 2-261284 (A) (43) 24.10.1990 (19) JP
 (21) Appl. No. 64-83659 (22) 31.3.1989
 (71) NIPPON HOSO KYOKAI <NHK> (3) (72) YUICHI NINOMIYA (2)
 (51) Int. Cl^s. H04N7/20, H04N7/00, H04N7/12

PURPOSE: To eliminate not only a dispersal signal but also a low frequency noise by selecting a time constant of a differentiating circuit so as to be suitable for eliminating the low frequency noise and compensating the deterioration in the elimination ratio of an energy spread signal with an energy spread signal elimination signal.

CONSTITUTION: The time constant represented by a capacitance of a capacitor 31 and a resistance of a resistor 32 is set to a value sufficiently eliminating low frequency noise. Moreover, an elimination signal generating circuit 33 outputs a residual energy spread signal elimination signal having a level characteristic inverse to that of an energy spread signal resident in an output of a clamp circuit synchronously with a frame pulse supplied to a terminal 34. The eliminating signal is amplified up to a prescribed signal amplitude by an amplifier 35 and fed to a switch 20 closed at the reception of a MUSE signal via a switch 36 and added to a difference signal between a reference DC level and a detection output of a DC level for clamp level period of the output signal of a D/A converter 19 and fed to a differentiating circuit, in which the level is clamped so that the mean DC level of a horizontal synchronizing signal is made coincident with the level of the summing signal.



a: to MUSE signal processing section, 17: level detection,
 18: DC reproduce, b: frame pulse

(54) COLOR DISPLAY DEVICE

(11) 2-261285 (A) (43) 24.10.1990 (19) JP
 (21) Appl. No. 64-83561 (22) 31.3.1989
 (71) TOSHIBA CORP (72) MASARU KAWACHI (1)
 (51) Int. Cl^s. H04N9/12, G09F9/30//H01S3/18

PURPOSE: To realize full color display with saved space without requiring a white color light source by using a semiconductor laser element for a light emitting source and using a wavelength conversion element arranged between an optical radiation face and a display face so as to convert a laser beam into a visual light.

CONSTITUTION: A laser beam outputted from laser elements 11-13 via a wavelength conversion element 14 is red(R) 11, green(G) 12 and blue(B) 13, and the RGB signal forms one picture element, when the laser beams 11-13 are driven and a liquid crystal shutter 16 with a matrix selects ON/OFF of the light beam, the RGB 3 primary colors are displayed selectively on a glass plate 18 to attain the picture display in full color. The semiconductor laser elements 11-13 are employed as the lighting source and the wavelength conversion element 14 made of a nonlinear optical material converts the laser light into a 2nd harmonic wave and the display plate 18 is irradiated with the laser light, then no white color light source is required and full color display with a saved space is attained.

